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1: Mol Microbiol. 1989 Jan;3(1):3-14.

Links

Three alpha-amylase genes of Aspergillus oryzae exhibit identical intron-exon organization.

Wirsel S, Lachmund A, Wildhardt G, Ruttkowski E.

Institut für Biochemie, Technische Hochschule, Darmstadt, FRG.

We have cloned three genes (amy1, amy2 and amy3) encoding alpha-amylase in the filamentous fungus Aspergillus oryzae. The established overall sequences have a very high degree of homology, showing divergences mainly in the 3'-untranslated regions. The positions and the sequences of the eight introns were found to be absolutely identical in the three genes. The sequence analysis of the 5'-regions revealed presumptive TATA, CAAT and GC boxes. Primer extension analysis was performed to determine the transcription start. We were able to detect mRNAs from amy1 and amy3 but not from amy2 with gene-specific oligonucleotide probes complementary to the 3'-noncoding regions.

PMID: 2785629 [PubMed - indexed for MEDLINE]

Related Links

Isolation of a cDNA encoding Aspergillus oryzae Taka-amylase A: evidence for multiple related genes.
[Mol Microbiol. 1989]

Aspergillus oryzae has two nearly identical Taka-amylase genes, each containing eight introns.
[Gene. 1989]

Cloning, characterization, and expression of two alpha-amylase genes from Aspergillus niger var. awamori.
[Curr Genet. 1990]

Isolation and characterization of the Aspergillus oryzae gene encoding aspergillopepsin O.
[Gene. 1993]

Nucleotide sequence of an alternative glucoamylase-encoding gene (glab) expressed in solid-state culture of Aspergillus oryzae.
[Gene. 1998]

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